Claim 11. (Original) Recombinant cell line or cell strain, transformed or transfected with the expression vector of claim 5.

Claim 12. (Original) Recombinant cell line or cell strain, transformed or transfected with the expression vector of claim 6.

Claims 13-23. (Canceled)

Claim 24. (Original) A method for producing a cytokine receptor comprising transforming or transfecting a cell with the isolated nucleic acid molecule of claim 1, culturing the thus transformed or transfected cell in culture medium to produce said cytokine receptor, and isolating it from said cell or culture medium.

Claim 25. (Original) A method for producing a cytokine receptor, comprising transforming or transfecting a cell with the expression vector of claim 4, culturing the thus transformed or transfected cell in culture medium to produce said soluble cytokine receptor, and isolating it from said cell or culture medium.

Claims 26-28. (Canceled)

Claim 29. (Currently Amended) An isolated oligonucleotide consisting of anywhere from 17 up to 100 contiguous nucleotides of the nucleotide sequence set forth in SEQ ID NO: 7, or SEQ ID NO: 9.

Claims 30-37. (Canceled)

REMARKS

Entry of the foregoing amendment is requested.

The issues regarding the specification (3a, 3b, and 3c of the Office Action) are addressed by the amendment.

Non-elected claims are canceled.

With respect to the restriction requirement, the Examiner's position appears to be that the Commissioner's waiver, as set forth in the MPEP, is out of date and thus can be ignored. There

is no basis in law for this. The Commissioner's guidelines must be followed unless and until the Commissioner revokes them, or they are set aside by operation of law. No such action has occurred. Hence, there is reason to consider all of SEQ ID NOS.: 7, 8, 9, and 10 at one time.

Further, the sequences are related. They perform the same function. They have a great deal of homology. There is every reason to consider them in toto. Hence, the Examiner is called upon to withdraw the restriction requirement.

In the absence of such withdrawal, an interview with the Supervisory Primary Examiner is requested, so as to avoid a need for a petition, which will be filed should the restriction requirement not be withdrawn.

The Examiner has also rejected the claims under 35 U.S.C. § 101, alleging no utility has been shown. A rejection under 35 U.S.C. § 112 is coupled to this rejection. These rejections are treated together, as they are linked, and they are traversed.

An experiment is set forth at pages 7-8, in example 7. Special attention is drawn to page 8, lines 17-26.

Cells were transfected with a chimeric receptor, i.e., IL-10R/LICR-2. This chimeric receptor includes the intracellular portion of LICR-2. The cells chosen, i.e., HT-29 cells, do not express IL-10R, and thus do not respond to IL-10. All of this is set forth in the discussion referred to, supra. The cells were then exposed to IL-10, and in a control, to IL-22 (the cells do express IL-22R). A luciferase assay was carried out, and cells contacted with IL-10 did, in fact, cause activation of STAT factors.

STAT factors are well known, and their role in cellular activity is understood. AS was shown by the example, the LICR-2 receptor can, and does, activate STAT receptors. This is a "real world," actual utility which cannot be dismissed. The utility requirement is satisfied and the coupled rejections under 35 U.S.C. §§ 101/112 should be withdrawn.

With respect to the rejection based upon stringent conditions, please see page 9, lines 7-10 of the specification. These conditions are incorporated into claim 1 as exemplary conditions. They are not the only conditions which will work.

The rejection of claim 29 is not understood. An attempt has been made to clarify the claim for the Examiner, but it is believed that the claim is clear. It is not intended that the claim be limited to a sequence starting at position 17 and ending at position 100. "Contiguous" means,

e.g., nucleotides 1-100, nucleotides 3-103, and so forth. There must be at least 17 nucleotides in the oligouucleotide, so while an oligonucleotide consisting of nucleotides 1-10 is NOT covered, one consisting of nucleotides 1-18 is, as is one consisting of nucleotides 1-35, 1-73, 10-84, and so forth. The claim very clearly sets this forth.

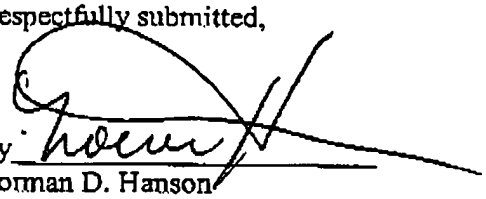
Should the Examiner disagree, she should provide appropriate language she finds acceptable.

All issues have been addressed. Withdrawal of the rejection, and allowance of this application is proper and is urged.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-0624, under Order No. LUD 5752 (10109097) from which the undersigned is authorized to draw.

Dated:

Respectfully submitted,



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binding protein," which acts as a natural IL-22 antagonist. See Dumoutier, *et al.*, *J. Immunol* 166:7090 (2001), Kotenko, *et al.*, *J. Immunol* 166:7096 (2001), incorporated by reference. The 12q region, particularly the interferon γ region, has been linked to or associated with a variety of autoimmune diseases, such as multiple sclerosis, inflammatory bowel disease, rheumatoid arthritis, types I and II diabetes mellitus, allergies and asthma. This suggests that AK155 and/or IL-22 in view of the location of the genes encoding these cytokines, may be involved in one or more of these, or other, autoimmune diseases.

It will be understood from the above, that there are two classes of cytokine receptors, i.e., class I and class II. Within the class I cytokine receptors, sharing of receptor subunits is a well recognized phenomenon. Subfamilies have been defined as a result of this phenomenon, including the gp130 and IL-2R families. In the case of class II receptors, however, the only example of a shared receptor up to now has been the IL-10Rβ chain, which is involved in both IL-10 and IL-22 signaling. See Dumoutier, *et al.*, *Proc. Natl. Acad. Sci USA* 97:10144 (2000); Kotenko, *et al.*, *J. Biol. Chem* 276:2725 (2000); Xie, *et al.*, *J. Biol. Chem* 275:31335 (2000) U.S. Patent Application Serial No. ~~09/913,735~~ 09/915,735, filed July 26, 2001 and incorporated by reference herein, describes members of the Class II cytokine receptor family, and a newly observed complex of two of these, i.e., IL-20Rβ and, IL-22R. It is of interest to determine the role of different class II cytokine receptors in the functions of different cytokines.

The disclosure which follows discusses the isolation and cloning of a new member of this family, referred to as "LICR-2." A ligand for this receptor has been identified as AK155. These features of the invention, as well as others, are described in the Detailed Description which follows.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

EXAMPLE 1

The protein sequence of IL-22BP was used for homology searching, together with TBLASTN software, to screen public libraries of the human genomic sequence. A region of homology was found on chromosome 1, positioned about 25 kilobases from the site of the IL-22R gene.